REMARKS/ARGUMENTS

U.S. Patent 5,585,951 to Noda now forms the basis of all prior art rejections in this parent reissue application. Noda has been previously applied as a reference in the companion reissue continuation application 10/915,717.

The office action alleges that Noda's planarization film 1784 is a photosensitive acrylic resin and that film 1784 is an insulating layer. The office action properly concedes that Noda does not disclose that the Noda planarization film 1784 has a dielectric constant of 3.4 to 3.8. *See,* the first full paragraph on page 3 of the office action. Yet the office action insinuates that U.S. Patent 4,460,667 to Landa allegedly proves the "scientific fact" that "the acrylic resin used to make the insulator in Noda et al has a dielectric constant property of 3.0 – 3.5. *See,* the second full paragraph on page 3 of the office action.

The office action particularly cites Landa col. 3, lines 48 – 50, which states that "The dielectric constant of an acrylic resin, such as methyl methacrylate, lies between 3.0 and 3.5." Applicants submit that the foregoing quote from Landa may purport to attribute a particularly dielectric constant range to some types of acrylic resin (methyl methacrylate). However, the office action incorrectly interprets the Landa quotation to prescribe a dielectric constant to *all* types of acrylic resins, and blindly extrapolates on the basis of Landa when attributing the Landa claimed dielectric constant to the planarization film of Noda.

The office action is not justified in quoting Landa as a putative teaching that Noda's acrylic resin necessarily has a dielectric constant between 3.0 and 3.5. Applicants submit that the record does not provide a basis to conclude that it is an established scientific fact the acrylic resin used in Noda necessarily has a dielectric constant property of 3.0 – 3.5. In contradiction to the overstated position of the office action, Applicants

cite US Patent 5,076,963 which describes certain acrylic resins as having a dielectric constant values of 10 or greater. Thus, it cannot be inferred from Landa that Noda's planarization film 1784 is in any particular dielectric constant range, and accordingly the prior art rejection must fail.

Noda's teaching regarding the planarization layers (11 and 1784) using acrylic resin is actually quite brief. For example, Noda only states that the planarization layers 11, 1784 are suitably selected from the specified organic materials and inorganic materials. As to the organic materials, for example, an acrylic resin or a polyimide resin may be used. Throughout Noda's disclosure there does not appear to be any significant discussion or concern regarding the dielectric constant associated with the material. Accordingly, it is unreasonable to equate the planarization layers 11, 1784 of Noda -- which are *possibly* made of acrylic resin -- with the claimed insulating layer having a specific dielectric range.

Quite differently, Applicants' specification describes Applicants' material as, for example, comprised of a copolymer of methacrylic acid and glycidyl methacrylate as a base polymer mixed with a naphthoquinone diazide positive-type photosensitive agent, and the resin is subsequently treated by curing (paragraph [0150] of P1). After curing, in one embodiment Applicants' acrylic resin has a dielectric constant of about 3.4. In view, e.g., of Applicants' particular formulation and process, it is manifest that using any acrylic resin will not automatically result in a dielectric constant within the claimed range. Indeed Applicants' independent claims that require a dielectric constant range invoke a limitation beyond that of a general acrylic resin.

Applicants further suggest that any alleged dielectric property of Noda's planarization layers 11, 1784 is thrown into further doubt by the fact that Noda never even mentions that planarization layers 11, 1784 are insulators. Significantly,

independent claims 43 and 52 require that the photo-imageable layer be an insulating layer. Noda makes no such mention. Although, the office action tacitly alleges at the top of page 3 that the Noda passivation film is an insulator, Noda never makes this statement. Rather, it appears that Noda's insulation effect is accomplished by two other layers.

In the above regard, in the embodiment of the upper figure of Noda's patent cover page the insulation layers are layers 5 and 8[1]; in the embodiment of the lower figure of Noda's patent cover page the insulation layers are layers 1778 and 1781. In particular, it is clear that in Noda Fig. 3 and Noda Fig. 17, both the planarization films 11, 1784, respectively, are formed on top of two insulating layers, namely the first insulating film 5, 1778 (respectively in Noda Fig. 3 and Noda Fig. 17) and the second insulating film 8, 1781 (respectively in Noda Fig. 3 and Noda Fig. 17).

Thus Noda clearly teaches insulating films that are separate from the planarization film 11, 1784. Therefore it is overreaching for the office action to allege that the planarization films 11, 1784 are an "insulating film".

Since there does not appear to be any teaching of the thickness of the insulating films 5 and 8, Noda does not appear to be a proper citation in order to cover the claimed insulating film having a thickness of 1.5 um or more. Fig. 17 of Noda does not appear to be instructive regarding the thickness of an alleged insulating film.

The office action properly concedes that Noda does not disclose a spectral transmittance of the transparent interlayer organic insulating film having a lower transmittance for blue light than that for green and red light. *See,* again, the first full paragraph on page 3 of the office action.

Somehow the office action seems to think that Applicants' own specification provides some basis for conjecturing that that the Noda planarization film, to which the office action improperly imputes a dielectric constant range of 3.0 to 3.5, also teaches a transparent interlayer organic insulating film having a spectral transmittance lower for blue light than for green and red light.

In the above regard, the office action makes specific reference to paragraph [0090] of Applicants' specification[2]. Applicants' specification paragraph [0090] is reproduced below for convenience:

> The acrylic resin constituting the interlayer insulating film 38 has a dielectric constant of 3.4 to 3.8 which is lower than that of an inorganic film (e.g., the dielectric constant of silicon nitride is 8) and a high transparency. Also, since the spin coating is employed, a thickness as large as 3 μm can be easily obtained. This reduces the capacitances between the gate line 22 and the pixel electrode 21 and between the source lines 23 and the pixel electrodes 21, lowering the time constant. As a result, the influence of the capacitances between the lines 22 and 23 and the pixel electrode 21 appearing on the display, such as crosstalk, can be reduced, and thus a good and bright display can be obtained.

Applicants wonder if instead the office action intended to cite paragraph [0094], quoted below:

> Since the thickness of the interlayer insulating film 38 is as large as several micrometers, thicker than that in conventional liquid crystal display, a resin with a transmittance as high as possible is preferably used. The visual sensitivity of a human eye for blue is a little lower than those for green and red. Accordingly, even if the spectral transmittance of the film

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[1] The two insulating films 5 and 8 are formed from, for example a glass doped with phosphorous, and are totally different from the claimed interlayer insulating film.

[2] The reference to applicants' published specification (in the last full paragraph on page 3 of the office action) should instead be to US 20010002857.

> has slightly lower transmittance for blue light than that for green and red light, the display quality will be not substantially deteriorated. Though the thickness of the interlayer insulating film 38 was made 3 μm in this example, it is not limited to 3 μm. The thickness of the interlayer insulating film may be set depending on the transmittance and the dielectric constant of the film. In order to reduce the capacitance, the thickness is preferably equal to or grater than about 1.5 μm, more preferably equal to or greater than about 2.0 μm.

Applicants fail to see how either paragraph quoted above or any other statement in their own specification would serve as a basis to impart limitations such as those found in the last paragraphs of independent claims 1 and 14 to the Noda planarization film. Applicants do not fathom the basis for the rejection of independent claims 1 and 14 in view of many factors, including those already mentioned: that Noda makes no teaching regarding the thickness of its planarization film; and that Noda does not teach that the Noda planarization film has insulation qualities.

Accordingly, if the present rejections of the independent claims are maintained in the next office action, Applicants therefore respectfully request the Examiner to clarify the basis for the assertions of this office action, including the allegation that "the acrylic resin taught by Noda et al that is photosensitive having a dielectric constant of 3.0-3.5, are properties of an insulating layer which has a lower transmittance for blue light than for green and red light".

In view of the foregoing, it is respectfully requested that all prior art rejections be withdrawn and the application be passed to issue.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: /H. Warren Burnam, Jr./

H. Warren Burnam, Jr.
Reg. No. 29,366

HWB:lsh
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100